

BEFORE
THE PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2019-224-E
DOCKET NO. 2019-225-E

In the Matter of:)	
)	
South Carolina Energy Freedom Act)	DUKE ENERGY CAROLINAS,
(House Bill 3659) Proceeding Related to)	LLC'S AND DUKE ENERGY
S.C. Code Ann. Section 58-37-40 and)	PROGRESS, LLC'S FOURTH SET
Integrated Resource Plans for Duke)	OF REQUESTS FOR
Energy Carolinas, LLC and Duke Energy)	PRODUCTION OF DOCUMENTS
Progress, LLC)	AND INTERROGATORIES TO
)	CAROLINAS CLEAN ENERGY
)	BUSINESS ASSOCIATION
)	

Duke Energy Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP”) (together, “Duke Energy” or the “Companies”), by and through their legal counsel, pursuant to Rule 103-833(C) of the Rules of Practice and Procedure of the Public Service Commission of South Carolina, hereby serve Carolinas Clean Energy Business Association (“CCEBA”)¹ with the following Fourth Set of Requests for Production and Interrogatories to be answered under oath on or before twenty (20) days from the date of service.

Further, please take notice that these Requests for Production and Interrogatories are continuing in nature until the date of the hearing, and that any information or responsive materials identified after your responses have been served upon the undersigned counsel should be provided via supplemental discovery responses as soon as possible after such identification.

¹ On June 26, 2019, the Commission issued Order Nos. 2019-467 and 2019-468 granting the South Carolina Solar Business Alliance, Inc.’s (“SCSBA”) petition for intervention in these proceedings. On March 10, 2021, the Commission issued Order No. 2021-167 granting SCSBA’s Motion to substitute CCEBA as the party of record and participant in these Dockets.

INSTRUCTIONS

1. Please produce the requested documents as they are kept in the usual course of business or to organize and label them to correspond with the categories in the Request. Documents attached to each other should not be separated.

2. In producing Documents, furnish all documents known or available to you, regardless of whether such documents are possessed directly by you or your agents, employees, representatives, investigators, or by your attorneys. All requests for Documents specifically request documents of CCEBA as well as agents or consultants that CCEBA has retained to provide expert testimony in this proceeding.

3. If any document otherwise responsive to any Request was, but is no longer, in your possession, subject to your control or in existence, identify each document by listing its author(s) and addressee(s), date, subject matter, whether the document(s) or copies are still in existence (and if so, their locations and the custodians), as well as whether the document is missing or lost, has been destroyed, has been transferred voluntarily to others, or has been otherwise disposed of. In each instance, explain the circumstances surrounding such disposition and identify the person(s) directing or authorizing its destruction or transfer, and the date(s) of such direction or authorization.

4. If a privilege or objection as to any Request is claimed, identify with specificity the matter as to which the privilege or objection is claimed, the nature of the privilege or objection, and the legal and factual basis for each such claim, and provide a complete description of the information or document being withheld.

5. Unless otherwise stated, the relevant time period for these Requests is from January 1, 2018, until the present.

6. Each Request shall be reproduced at the beginning of the response thereto.
7. Please provide copies of the information responsive to each Request in native electronic working format with all data and formulas intact.
8. Please provide responses to the following data requests electronically. To the extent this is impracticable, the responses, including any responsive Documents, should be provided at the offices of Robinson, Gray, Stepp & Laffitte, LLC, 1310 Gadsden Street, Columbia, South Carolina 29201, or some mutually convenient location otherwise agreed to by the parties.

DEFINITIONS

1. **“Commission”** means the Public Service Commission of South Carolina.
2. **“Communication”** means the transmittal of information in the form of facts, ideas, documents, inquiries, or otherwise, including every discussion, conversation, conference, or telephone call.
3. **“You”** and **“your”** means CCEBA and CCEBA’s witnesses in this proceeding, including but not limited to, retained witnesses from Solar Energy Industries Association, and Energy and Environmental Economics, Inc., and all of their members, agents, representatives and attorneys.
4. **“Dockets”** means Commission Docket Nos. 2019-224-E & 2019-225-E.
5. The term **“document”** is to be construed as broadly as permissible under Rule 34 of the South Carolina Rules of Civil Procedure and includes, but is not limited to, any printed, typewritten, handwritten or otherwise recorded information of whatever character, including, but not limited to, letters, memoranda, notes, diaries, reports, records, calendars, charts, audio and/or video tapes or discs, and photographs; computer programs or disks; electronic media records, however recorded and maintained, including, but not

limited to, electronic mail, voicemail messages, digital photographs and electronically scanned records of any type; recorded observations, statements, conversations or formal affidavits. Any carbon or photocopy of any such materials upon which notations have been made and all drafts are also included.

6. **“Person”** means any natural person or any business, legal, or governmental entity or association.

7. The terms **“related to”** and **“relating to”** or any variation thereof shall be construed to include refer to, summarize, reflect, constitute, contain, embody, mention, show, comprise, evidence, discuss, describe, comment on, concerning, regarding, eluding to, pertaining to, probative of, in connection with, dealing with, in respect of, about, involved, identifying or proving.

8. **“Identify”** when referring to a Person, means to give, to the extent known, the Person’s full name, present or last known address, and when referring to a natural Person, additionally, the present or last known place of employment.

9. **“Identify”** when referring to documents, means to give, to the extent known, the (i) type of Document; (ii) general subject matter; (iii) date of the Document; and (iv) authors, addressees and recipients.

10. **“Identify”** when referring to an oral Communication, means to give, to the extent known, the identity of the speaker and of each Person who was present when the Communication was spoken, and the substance, date, and place of such Communication.

11. **“Integrated Resource Plans” or “IRPs”** refers to DEC’s and DEP’s respective integrated resource plans filed with the Public Service Commission of South Carolina in the Dockets on September 1, 2020.

INTERROGATORIES

4-1. Referring to documents produced in response to Document Request No. 1-24 (First Set), the E3 RECAP “calculation settings” files indicate that 30 monte carlo draws were performed. Please describe the 30 monte carlo draws in detail and explain what they represent.

ANSWER:

4-2. Referring to documents produced in response to Document Request No. 1-24 (First Set), the E3 RECAP “calculation settings” files indicate that 30-day window variable draws were performed. Please describe the 30 variable draws in detail and explain what they represent.

ANSWER:

4-3. Referring to documents produced in response to Document Request No. 1-24 (First Set), the solar profiles included in the E3 RECAP datasets appear to cover only weather years 1998-2018, while the included loads cover weather years 1980-2018. Regarding this discrepancy:

- a. Please describe in detail how the E3 RECAP model determines which daily solar profile to use with each daily load shape?
- b. If it is correct that the included solar profiles reflect only weather years 1998-2018, please explain why the full dataset from 1980-2018 was not utilized?
- c. Identify whether each day in the 1980-2018 timeframe is simulated, similar to the approach taken in the Companies' 2020 Resource

Adequacy Studies? If not, please describe what is simulated and why it did not include every day during the time period.

- d. Identify whether the E3 RECAP model assumes each weather year from 1980-2018 has an equal likelihood of occurrence? If not, please explain.

ANSWER:

4-4. Referring to documents produced in response to Document Request No. 1-24 (First Set), please describe how thermal resources are dispatched in the E3 RECAP model.

ANSWER:

4-5. Referring to documents produced in response to Document Request No. 1-24 (First Set), please describe how hydro resources are dispatched in the E3 RECAP model.

ANSWER:

4-6. Referring to documents produced in response to Document Request No. 1-24 (First Set), please describe how battery resources are dispatched in the E3 RECAP model.

ANSWER:

4-7. Referring to documents produced in response to Document Request No. 1-24 (First Set), please state whether the E3 RECAP model is an hourly chronological dispatch model based on economic commitment and dispatch.

ANSWER:

4-8. Referring to documents produced in response to Document Request No. 1-24 (First Set), please describe the extent, if any, that E3 RECAP model rely on regions surrounding DEC and DEP. To the extent the model relied on surrounding regions to provide capacity and/or energy into the DEC and/or DEP grid, identify the assumed resource mix of the surrounding regions. If the EC RECAP model did not rely on surrounding regions, please explain why not.

ANSWER:

4-9. Referring to documents produced in response to Document Request No. 1-24 (First Set), identify whether DEC and DEP were simulated together or separately in the EC RECAP model. If simulated together, please identify the transmission assumptions used.

ANSWER:

4-10. Referring to documents produced in response to Document Request No. 1-24 (First Set), please identify whether the E3 RECAP model incorporated seasonal generator outages in its analysis to capture expected outages by season. If no such seasonal generator outages were included in the model, please explain why not.

ANSWER:

4-11. Referring to documents produced in response to Document Request No. 1-24 (First Set), please identify whether the E3 RECAP model incorporated any cold weather outages in its analysis to reflect likely increase of generator outages during extreme winter events. If no such cold weather outages were incorporated into the model, please explain why not.

ANSWER:

4-12. Referring to documents produced in response to Document Request No. 1-24 (First Set), please describe the methodology used to calculate the 2040 loads for 1980-2018 included in the produced “load component shapes” csv file. In addition, please describe in detail the “Base Load” and “EV Load” for both DEC and DEP as shown in those files.

ANSWER:

4-13. Referring to the “Duke_BTM_solar,” “Duke_Candidate_solar,” and “Duke_existing_solar” csv profiles produced in response to Document Request No. 1-24 (First Set), please describe how these profiles were developed and what each represents.

In your response, please:

- a. Identify the amount of capacity assumed for each in the solar and storage ELCC analysis.

- b. Identify the amount of FT and SAT assumed for the Candidate solar and the Existing solar.
- c. Identify the assumed DC:AC ratio for Candidate solar and Existing solar.
- d. Describe how the profiles were developed based on the FT, SAT and DC:AC ratio assumptions provided.

ANSWER:

4-14. Referencing Mr. Lucas's response to Interrogatory No. 1-9, please provide references to the specific page numbers and documents of the three referenced proceedings before the Michigan Public Service Commission (Case No. U-18419), the Minnesota Public Utilities Commission (Docket E-002/M-16-777), and the Colorado Public Utilities Commission (No. 16A-0396E) whereby the respective Commission specifically found or addressed "the potential for energy-only resources to provide savings compared to the running costs of existing resources." If the response refers to approved resource planning models whereby that capability is implied, please provide the specific working documentations of the model and the parameters of the model that was approved in their respective proceedings.

ANSWER:

4-15. As provided in the instructions to these Requests, if a privilege or objection as to any Interrogatory is claimed, identify with specificity the matter as to which the privilege or objection is claimed, the nature of the privilege or objection, the legal and

factual basis for each such claim, and a complete description of the information or document being withheld.

ANSWER:

REQUESTS FOR PRODUCTION

4-1. Please produce a copy of the RECAP user manual.

RESPONSE:

4-2. As provided in the instructions to these Requests, if a privilege or objection as to any Request is claimed, identify with specificity the matter as to which the privilege or objection is claimed, the nature of the privilege or objection, the legal and factual basis for each such claim, and a complete description of the information or document being withheld.

RESPONSE:

Dated this 12th day of March 2021.

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